SUPERFUND PRELIMINARY CLOSE-OUT REPORT

Avtex Fibers Superfund Site
Front Royal, Warren County, Virginia
EPA ID VAD0070358684

I. INTRODUCTION

This Preliminary Close-out Report (PCOR) documents that the construction activities for the Avtex Fibers Superfund Site (Site) have been completed. This determination was conducted in compliance with the *Close-out Procedures for National Priorities List Sites* (OSWER Directive 9320.2-22, May 2011).

The U.S. Environmental Protection Agency (EPA) and the Commonwealth of Virginia conducted a pre-final inspection on July 1, 2014 and determined that the potentially responsible party (PRP) constructed the remedy in accordance with approved design plans and specifications. No additional construction activities are anticipated. The PRPs have initiated activities necessary to achieve performance standards and site completion.

II. SUMMARY OF SITE CONDITIONS

Background

The Avtex Fibers Superfund Site is a former rayon manufacturing facility consisting of approximately 440 acres, located in Front Royal, Virginia. The Norfolk Southern railroad runs through the middle of the Site separating the former production facilities on the eastern side of the railroad tracks from the disposal units located on the western side of the railroad tracks. Residential areas are located to the east, south and north of the property boundaries. The South Fork Shenandoah River is located along the western portion of the property. The location of the Site is shown on Figure 1. A photo of the Site taken in May 2014 from an overlook in Skyline Drive in Shenandoah Park is provided in Appendix 1.

The Site was proposed for the National Priorities List (NPL) on October 15, 1984 (49 FR 40320) and listed on the NPL on June 10, 1986 (51 FR 21054) due to the discovery of groundwater contamination in residential wells, and the first ROD, selecting a "pump and treat" remedy for groundwater, was issued in September 1988. A little over a year later, the Virginia Water Control Board revoked the NPDES permit, and Avtex declared bankruptcy and ceased operations. Subsequently, EPA initiated emergency removal actions to prevent releases from reactive and dangerous materials left in tanks, piping, and buildings. To facilitate management of the cleanup, the remediation activities were divided into ten operable units and three removal actions which are listed below on Table 1. A summary of the selected remedies and the Remedial Action Objectives (RAOs) is provided in Table 2.

Table 1 - Summary of Operable Units and Removal Actions		
OU/Removal Action	Description	Status
1	Groundwater – ROD #1 issued on 9/30/88	Suspended and deferred to OU-7
2	PCB Contaminated Soil – ROD #2 issued on 9/28/90	Completed January 1992
3	Acid Reclaim Building – ROD #2 issued on 9/28/90	Completed September 1993
4	Site Security – ROD #2 issued on 9/28/90	Completed September 2002
5	Drum material – ROD #2 issued on 9/28/90	Completed September 1994
6	Investigation of Buildings	Suspended and deferred to Time Critical Removal Action (TCRA)
7	Groundwater, Surface Water and Viscose Basins 9, 10, and 11- ROD #5 issued on January 13, 2010	Construction Complete and Final Reports are under review
8	Areas B (open lot) and C (former parking lot) – ROD #3 issued on 9/29/00	Being addressed through a Conservation Easement/ Environmental Covenant
9	Ecological Investigation and Risk Assessment. Risks were addressed under Non-Time-Critical Removal Action (NTCRA) #1- Basins; ROD #4 (OU-10 ROD) for Plant Area Soils, Viscose Basins 1 through 8, New Landfill, and Waste Water Treatment Plant (WWTP); and ROD #5 (OU-7 ROD) Groundwater, Surface Water and Viscose Basins 9, 10, and 11	Complete
10	Plant Area Soils, Viscose Basins 1 through 8, New Landfill, and WWTP – ROD #4 (OU-10 ROD) issued on March 10, 2004	Construction complete and Final Reports are under review
TCRA	Building investigation, demolition of some buildings, and management of building demolition debris, accumulated wastes, wastewater and storm water	Completed September 28, 2011
NTCRA #1	Basins – includes Sulfate Basins (SB) 1 through 5, Fly Ash Basins, Fly Ash Stock Pile, and WWTP Basins, Polishing Basins (PB) and Emergency Lagoon (EL). Issued January 31, 2000.	Construction Complete and Final Reports are under review.
NTCRA #2	Remaining Buildings and Sewers. Decontaminate buildings, tanks, piping,	Construction Complete and Final Reports are under review

Table 1 - Summary of Operable Units and Removal Actions		
OU/Removal Action	Description	Status
	duct work, and equipment; evaluate underlying soils and remediate; excavate and remove all sewers and manholes; and evaluate soils associated with sewers and remediate. Issued December 20, 2001	

EPA conducted emergency removal actions and remedial actions for OU2, OU3, OU4, OU5, and OU8 from 1989 until 1999. In 1999, EPA entered into a Comprehensive Consent Decree with FMC Corporation (FMC) to implement a Time Critical Removal Action (TCRA), Two Non-Time Critical Removal Actions (NTCRA), an OU 7 ROD and an OU 10 ROD. A summary of the selected remedial actions is provided below in Table 2.

Table 2 Summary of Selected Remedies and Remedial Action Objectives

ROD	Date	Remedy Description	RAOs
1	9/30/88	**OU1** - Pump and treat groundwater – this ROD was suspended when Avtex ceased operations in November 1989.	Non-applicable – deferred to OU7 ROD
2	9/29/90	**OU2** – PCB contaminated soils – excavate, transport and dispose of 5,000 cubic yards of PCB contaminated soil. This work was initiated by EPA on March 4, 1991 and completed on January 22, 1992. **OU3**- Dismantle and demolish the unstable acid reclaim facility was initiated by EPA on March 4, 1991 and completed on September 23, 1993. **OU4** – Provide Site security. This was initiated by EPA on July 22, 1991. FMC took over the lead for performing site security in October 1999. **OU5** – identify, transport and dispose of 2,879 drums. The OU5 remedial action was completed by EPA in September 1994.	Mitigate potential risks to public health and the environment associated with wastes contained in drums, PCB contaminated soils, the acid reclaim facility and the possible lack of site security, control, maintenance and health and safety measures. Additionally, this remedial action will remove obstructions to future site investigations and remediation efforts.
3	9/29/00	**OU8** – Institutional Controls to permanently restrict the land use for Area B (open lot) and Area C (former parking lot). A Conservation Easement was filed on December 7, 1999 that permanently restricts Areas B and C to commercial/industrial use. All of the signatories to the Easement can enforce the terms of the Easement. EPA and the signatories of the Easement are in the process of drafting environmental covenants as provided for in a January 23, 2012 Explanation of Significant	Ensure that the reasonable anticipated future land use remains commercial/industrial in perpetuity.

Table 2 Summary of Selected Remedies and Remedial Action Objectives			
ROD	**Date**	**Remedy Description**	**RAOs**
		Difference to replace the existing Conservation Easement.	
4	3/10/04	**OU10** – Plant Area soils, Viscose Basins 1– 8, New Landfill and WWTP Work was performed between 2002 and 2013 by FMC with EPA oversight in accordance with a 1999 Consent Decree. **Plant Area soils** – remediate all the plant area soils outside the footprint of the buildings. An ESD added an area adjacent to the plant area referred to as the expanded plant area soils. Soils were remediated between 2002 and 2009. A risk analysis of all the plant area soils remaining on-site after the completion of the remedial action was conducted in 2012 and concluded that the soils remedy is protective for a current or future industrial worker. **Viscose Basin 1-8** – completed by FMC with EPA oversight in 2009. Construct a soil cover that provides: 1. A final cover with an 18 inch soil infiltration layer that achieves a maximum permeability of 1.0 X 10-6 cm/sec. 2. An erosion layer of a minimum of six inches of soil capable of supporting native plants. 3. A subsurface drain adjacent to VB 4-6 to collect leachate and convey to a WWTP. 4. Controls to prevent the build-up of gases. **New Landfill** – completed by FMC with EPA oversight in 2012 1. Place a 24-inch soil cover on the NL and grade to promote positive drainage. 2. Install passive gas vent or trenches. 3. Install piping to convey leachate to an on-site WWTP. **WWTP** – completed by FMC with EPA oversight in 2013 1. Flush and decontaminate lines, decontaminate concrete basins and tanks and treat liquid waste. 2. Remove and/or demolish above grade structures.	**Plant Area Soils** 1. Mitigate direct contact risks to humans and ecological receptors posed by contaminants in Plant Area Soils. 2. Mitigate future human health and ecological risks associated with the potential migration of contaminants and, 3. Mitigate current and potential future risks associated with the migration of contaminants to groundwater. **Viscose Basins 1-8 and the New Landfill (NL)** 1. Prevent direct contact with the VB 1-8 and the NL soils and waste by humans and ecological receptors and prevent the migration of contaminants. 2. Mitigate current and future potential risks to human health and ecological receptors associated with VB 1-8 leachate and uncovered leachate contaminated soil. 3. Control production and uncontrolled release of VB 1-8 and NL gases. **WWTP** Remove WWTP when It is no longer needed.

Table 2 Summary of Selected Remedies and Remedial Action Objectives			
ROD	**Date**	**Remedy Description**	**RAOs**
ESD 1	1/10/06	**ESD 1** – Modification to OU10 ROD Completed by FMC with EPA oversight in 2009. Contaminated soils were discovered outside the plant area identified in the OU10 ROD. The ESD selected excavation of these additional soils to meet the performance standards.	Prevent direct contact with soils containing contaminants which exceed health-based levels.
5	1/13/10	**OU7** – Groundwater, surface water and VB 9-11 – Construction of the ground water and VB 9-11 was completed by FMC with EPA oversight in 2014 under a 1999 Consent Decree. Annual monitoring of surface water is ongoing. The major remedial components of OU7 include: 1. Installation of a low permeability cap on VB 9-11. 2. Construct and operate a groundwater extraction and treatment system to meet the risk based cleanup standards. 3. Evaluate VB 9-11 for extraction and treatment of the leachate to meet performance standards. 4. Characterize, remove and dispose of impacted sediments from seeps associated with VB 9-11. 5. Implement Institutional Controls. 6. Provide water to impacted property owners on the west side of the South Fork Shenandoah River. 7. Annual sampling of surface water, sediments, and biota in the South Fork Shenandoah River. 8. Surface water sampling of the drainage way north of VB 9- 10 after construction of the cap.	1. Prevent human exposure to contaminated groundwater that would result in unacceptable levels of risk. 2. Prevent human and ecological receptor exposure through direct contact with waste in VB 9-11. 3. Mitigate risks from principle threat waste in VB 9-11 through treatment of the leachate. 4. Restore groundwater to its beneficial uses by reducing contaminant concentrations. 5. Mitigate further releases to groundwater from VB 9-11. 6. Control and mitigate plume discharge to river. 7. Control the release of noxious gases from VB 9-11.

Table 2 Summary of Selected Remedies and Remedial Action Objectives			
ROD	**Date**	**Remedy Description**	**RAOs**
ESD 2	1/22/12	Modification to OU7, OU8 and OU10 RODs Modified the Ecological Protective Backfill Values selected in the OU7 ROD for five metals. The OU7 ROD selected concentrations lower than naturally occurring regional background levels. This ESD selected appropriate clean-up numbers. This work was completed by FMC with EPA oversight in 2014. Selected and modified the institutional control selected in OU7 and OU8 RODs and acknowledged in the OU7, OU8, and OU10 RODs. These documents are currently being drafted.	RAOs not identified in this ESD.

Chronological Description of Removal and Remedial Activities

Time-Critical Removal Actions (TCRA) – Buildings (1994 – 2011)

EPA's remedial program performed a building investigation and evaluation in 1994 and 1996. It found that areas of the facility had high chemical hazard (large amount of remaining chemicals, leaking pipes, vessels) and poor structural integrity. Based on these findings EPA undertook a time-critical removal action to demolish manufacturing buildings. This action eliminated approximately 17 acres of building structures, generated over 100,000 cubic yards of debris and waste materials, and 5,720,000 gallons of wastewater. In September 1998, as part of a global settlement with EPA, FMC assumed the responsibility to manage the demolition debris and waste materials, as well as manage wastewater and storm water at the Site. FMC began managing the waste in accordance with an EPA-approved plan in October 1999. The majority of this work was completed in 2006 with some components incorporated into the NTCRAs and OU10 Remedial Action. EPA determined that the work was completed on September 28, 2011.

Non-Time Critical Removal Action NTCRA- Basins (2000 – 2014)

The basin area of the Avtex Site occupies approximately 240 acres lying on the west side of the Norfolk-Southern Railroad tracks. EPA signed an Action Memorandum on January 31, 2000 for the closure of the basins. The goal of this removal action was to mitigate current and potential future risk to ecological receptors from direct contact with uncovered waste in the basins and to mitigate the release of contaminants which may be potentially affecting the ecological receptors in the South Fork Shenandoah River. The cleanup plan called for the consolidation of wastes on site and provided for closure of the basins containing wastes using engineered protective caps. FMC began implementing the closure of the Basins project in May 2001, following approval of the Response Action Plan in April 2001. The following is a general schedule of the basin closure activities:

- Fly Ash Basins 1, 2, 3, and 6 and Fly Ash Removal Area – 2- foot clean soil cap construction performed in 2001 and 2002.
- Fly Ash Stockpile – Clean closure (most of area) and construction of 2-foot clean soil cap (isolated areas) performed in 2006.
- Sulfate Basin 5 – remediation, clean closure, and construction of wetlands and pond performed in 2001 and 2002. A photo is provided in Appendix 1.
- Sulfate Basin 3 – low permeability cap construction performed in 2002 with subsequent repairs due to differential settlement in 2013.
- Sulfate Basin 4 – low permeability cap construction performed in 2002 and 2004 with subsequent repairs due to differential settlement in 2013.
- Sulfate Basin 1, cell 1 – low permeability cap construction performed in 2002 and 2003 with subsequent repairs due to differential settlement in 2013.
- Sulfate Basin 2 – remediation and 2-foot clean soil cap construction performed in 2010.
- Polishing Basin 3 – 2-foot clean soil cap construction performed in 2010.
- Sulfate Basin 1, Cells 2-4 – low permeability cap construction performed in 2010 – 2011, with subsequent repairs due to differential settlement in 2013.
- Polishing Basins 1, 2 - remediation and 2-foot clean soil cap construction performed in 2013 with repairs in 2014.
- Emergency Lagoon – remediation and low permeability cap construction performed in 2013.

The physical construction of the remedies for the basins is complete. The final report is under review. Photos of the Basin Area are provided in Appendix 1.

Non-Time Critical Removal Action – Buildings and Sewers (2002 – 2013)

The Buildings and Sewers remediation activities were performed from January 2002 through December 2013. A general schedule of the major remediation-related tasks is provided below:

- Decontamination of buildings, foundations, above ground structures, and subgrade structures – January 2002 through June 2011
- Removal of sewers and manholes (performed in three phases):
    - Phase I: northern quarter of the former Plant Area – 2005
    - Phase II: southern three quarters of the former Plant Area – 2007 – 2011
    - Phase III: area west of the railroad tracks to the South Fork Shenandoah River including sewers associated with WWTP – 2009- 2013

The sewer removal work was a major undertaking resulting in the removal of 56,470 linear feet of sewers. The diameter of the sewers ranged from four inches to 72 inches. The sewers were located anywhere from four feet to 30 feet below the surface. In addition to the sewers, 222 manholes associated with the sewers were removed.

Soils in the former plant area were remediated under both the NTCRA and OU 10 and is discussed below under OU 10.

OU10 – Viscose Basins 1 through 8, the New Landfill, the Plant Area Soils and the WWTP (2006 – 2014)

The March 2004 ROD called for remediating plant area soils, capping the viscose basins and the on-site landfill (New Landfill), treating leachate and monitoring groundwater. In addition, the remedy selected the demolition of the WWTP, which was used to treat leachate and storm water run-off. The OU10 ROD was subsequently modified with an ESD in 2006 to include remediation of additional soils referred to as the expanded plant area.

Viscose Basins 1-8 and New Landfill

The capping of Viscose Basins 1 through 8 with a geosynthetic liner with two feet soil cover and 21 gas vents was completed in 2009. The New Landfill cap includes a geosynthetic liner with two feet soil cover and four gas vents was completed in 2012.

Leachate from the Viscose Basins and the New Landfill was treated in a modular unit until the construction of the Groundwater Leachate Treatment Plant (GLTP), a component of the OU 7 remedy, was completed in July 2014. The GLTP began treating this leachate in August 2014.

There are nineteen monitoring wells included in the annual monitoring well network for both the Viscose Basins and the New Landfill.

Plant Area Soils

The Site was carved into 100 foot grids and soils were excavated until the sample results were below the cleanup levels in the OU10 ROD and ESD. Soils from 0 to 10 feet were remediated to meet the direct contact human health standards and the groundwater protection standards. Soils greater than ten feet in depth had to meet the groundwater protection standard only.

Soils that were characteristically hazardous due to metals (lead) were stabilized. Approximately 1,600 cubic yards of lead impacted soils were excavated from the Lead Shop area and stabilized. These stabilized soils were disposed under the cover of the New Landfill. Soils with total PCB concentrations greater than 25 mg/kg but less than 50 mg/kg of PCBs were used in basin and landfill closures below the infiltration layer. Soils exceeding the direct contact human health standard but not the groundwater protection standard were used in basin or landfill closures below the infiltration layer. Soils exceeding the groundwater protection standard were disposed off-site.

An evaluation of the protectiveness of the OU 10 Plant Area Soils and the NTCRA –Buildings soils was conducted in 2012. Over 500 post-excavation samples (for soils remaining on-site) were rescreened against the April 2012 Regional Screening Levels (RSLs). This evaluation demonstrated that the soils from zero to ten feet below ground surface are protective of human health for an industrial/commercial scenario and both the surface and the deeper soils are protective to groundwater. A photo of the former plant area is provided in Appendix 1.

Wastewater Treatment Plant (WWTP)

The WWTP was demolished in 2013 in accordance with the EPA-approved Work Plan dated September 26, 2012. All of the above ground structures were removed with the exception of a 40 by 60 foot storage building, historically referred to as the tin building. This tin building will be used for storage of O&M equipment. A photo of the former WWTP area is provided in Appendix 1.

OU7 – Viscose Basins 9 through 11, Groundwater, and Surface Water (2010 – 2014)

The January 2010 OU7 ROD selected low permeability caps and a leachate extraction system for Viscose Basins 9 through 11; a groundwater pump and treat system for contaminated groundwater and annual monitoring of the South Fork Shenandoah River.

Viscose Basins 9 through 11

The pre-design activities in 2010 included a bridging layer on the basins with leachate extraction and bench-scale testing for the Groundwater Leachate Treatment Plant (GLTP). Attic fill to support the cap was placed on top of the bridging layer in 2011. The low permeability cap was constructed in 2012.

Groundwater and Leachate

The OU7 ROD selected two groundwater bedrock extraction wells on the east side of the South Fork Shenandoah River with the condition that if these two wells were unable to capture the plume extending under and beyond the river, EPA would require a third groundwater bedrock well on the west side of the river. Two extraction wells were installed in 2011. After review of a capture zone analysis report, dated November 13, 2012, EPA determined an additional extraction well on the west side of the South Fork Shenandoah River was necessary.

The third extraction well was drilled in July 2013 and a pump was installed at a depth of 400 feet below ground surface. The addition of this well required a lateral well to be drilled through the bedrock under the river to convey the contaminated groundwater to the treatment system. This lateral well was completed in October 2013.

The primary contaminants identified in the groundwater human health risk assessment are arsenic, carbon disulfide, and mercury. Carbon disulfide is odorous at low concentrations, and also very flammable. The GLTP design includes an enclosed leachate tank with an air scrubber to control odors. The leachate is blended with contaminated groundwater in an enclosed 192,000 gallon equalization tank. The treatment train includes metal precipitation, biological treatment, equalization, multi-media filtering, granulated activated carbon filtering, and bag filters to remove solids. The solids/sludge is processed through a filter press with the solids being disposed off-site and the effluent discharged to the South Fork Shenandoah River.

Construction of the GLTP started in 2012 and was completed in June 2014. VADEQ provided NPDES equivalency discharge limits August 4, 2014. Testing, commissioning, and shakedown was initiated in August 2014 and plant start-up is scheduled for September 2014.

Surface Water

The OU 7 ROD selected annual surface water and sediment sampling for the South Fork Shenandoah River. Aquatic biota and sediment samples are collected every three years. The first annual sampling event was conducted in September 2012 and summarized in a report dated April 5, 2013. These results can be used as a baseline for the last remedial action start.

Site-Wide Institutional Controls

The OU 7, OU 8 and OU 10 RODs either selected or acknowledged an existing Conservation Easement as an Institutional Control. Valley Conservation Council, Lord Fairfax Soil Conservation District, EPA and FMC may enforce the existing Conservation Easement. Several of the signatories to the Easement requested modifications to the existing agreement. On January 23, 2012, EPA issued an Explanation of Significant Differences to replace the existing Conservation Easement with multiple Virginia Uniform Environmental Covenants to address the different uses of property.

EPA is working with the signatories of the Conservation Easement and Warren County in drafting these environmental covenants. The Conservation Easement remains in place as a Site-wide institutional control until the environmental covenants are in place.

Redevelopment Potential

Approximately 240 acres (the basin area) of the site has been designated as a conservancy. The remedial construction for the conservancy area is complete and the conservancy has been established. Photos of the basin area are provided in Appendix 1.

The former plant area comprises approximately 160 acres. A portion of the plant area, a former parking lot comprised of approximately five acres, was sold to the town of Front Royal with plans to develop a police station. The Economic Development Authority is working to develop the former plant area into commercial/light industrial area.

III. DEMONSTRATION OF CLEANUP ACTIVITY QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC)

The methods, procedures, inspections and tests were performed in accordance with the Construction Quality Assurance Plans prepared as part of the EPA approved remedial designs and Response Action Plans. There were no significant deviations. EPA's oversight contractor provided full time oversight for most of the remedial and removal actions and verified that the Construction Quality Assurance Plans were implemented.

Construction completion is consistent with the remedies selected in the site RODs, subsequent ESDs and the removal actions.

IV. SCHEDULE OF ACTIVITIES FOR SITE COMPLETION

Construction completion of the Site shall be documented by the signature of this Preliminary Close-out Report. All preliminary construction completion requirements for the Site have been met as specified in OSWER Directive 9320.2-22. The following activities necessary to achieve site completion will be completed according to the following schedule:

Task	Estimated Completion	Responsible Organization
Complete the Final Inspection	September 19, 2014	EPA/PRP/VADEQ
Complete Remaining Punch list items	September 19, 2014	PRP
Approve Final Remedial Action Reports and Removal Action Reports	March 30, 2015	EPA
Complete 5th Five-year review	March 26, 2018	EPA
Complete Groundwater and Leachate Pump and Treat	September 30, 2044	PRP
Approve Final Closeout Report	September 30, 2044	EPA
Deletion from NPL	June 30, 2045	EPA

V. FIVE-YEAR REVIEW

Pursuant to CERCLA section 121(c) and as provided in the current guidance on Five Year Reviews [*Comprehensive Five-Year Review Guidance, OSWER Directive 9355.7-03B-P, June 2001*], EPA must conduct a statutory Five-Year Review because the remedial action left hazardous substances, pollutants, or contaminants on site above levels that allow for unlimited use and unrestricted exposure. EPA completed the fourth Five-Year Review on March 26, 2013. The next Five-Year Review is required by March 2018.

Cecil Rodrigues, Director
Hazardous Site Cleanup Division
U.S. EPA Region III

3/29/2014
Date

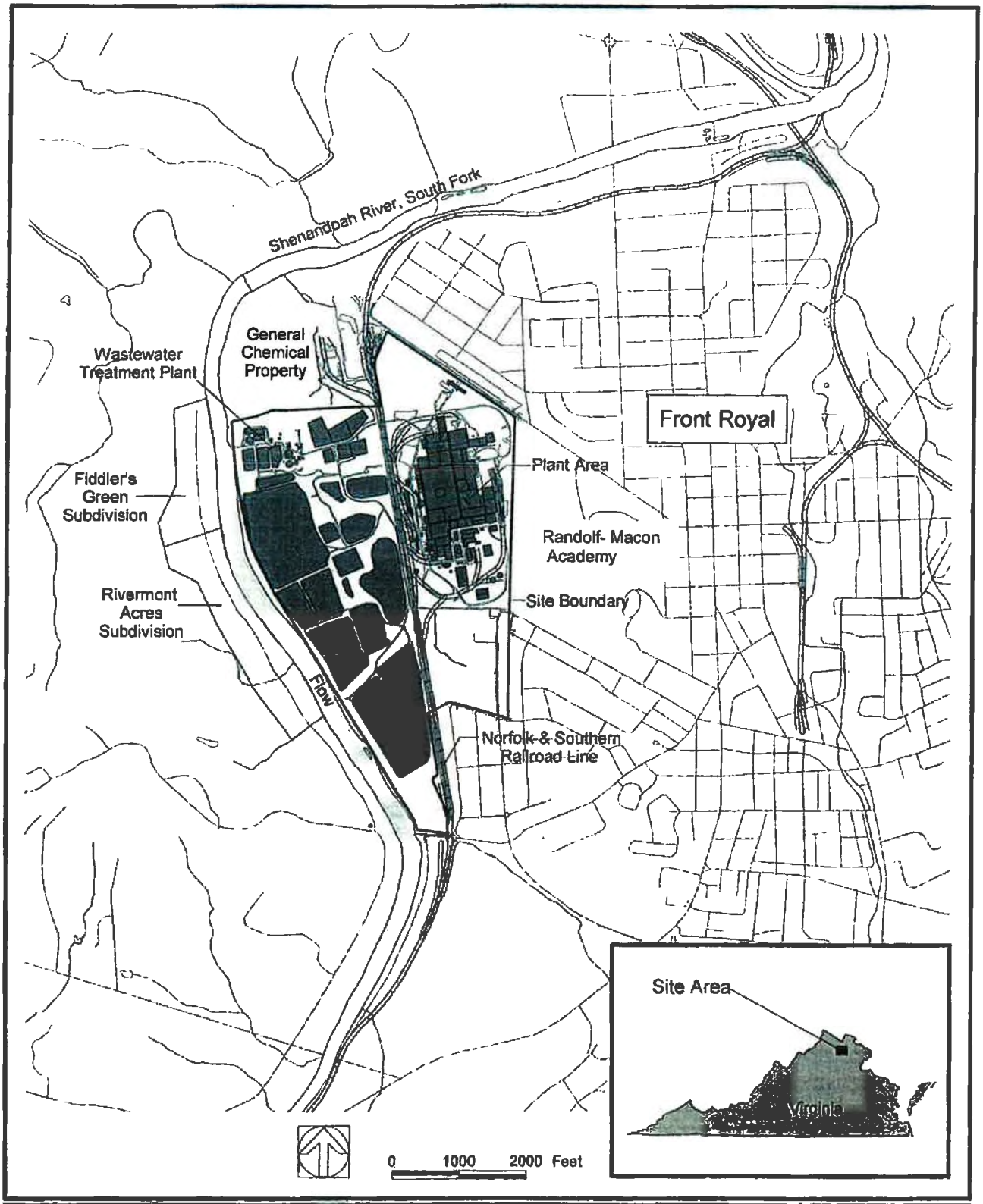


Figure 1 Avtex Location Map

APPENDIX 1

Avtex from overlook on Skyline Drive facing north. The vertical line in the center is the Norfolk Southern Railroad. Basins to the left, Plant Area to the right.

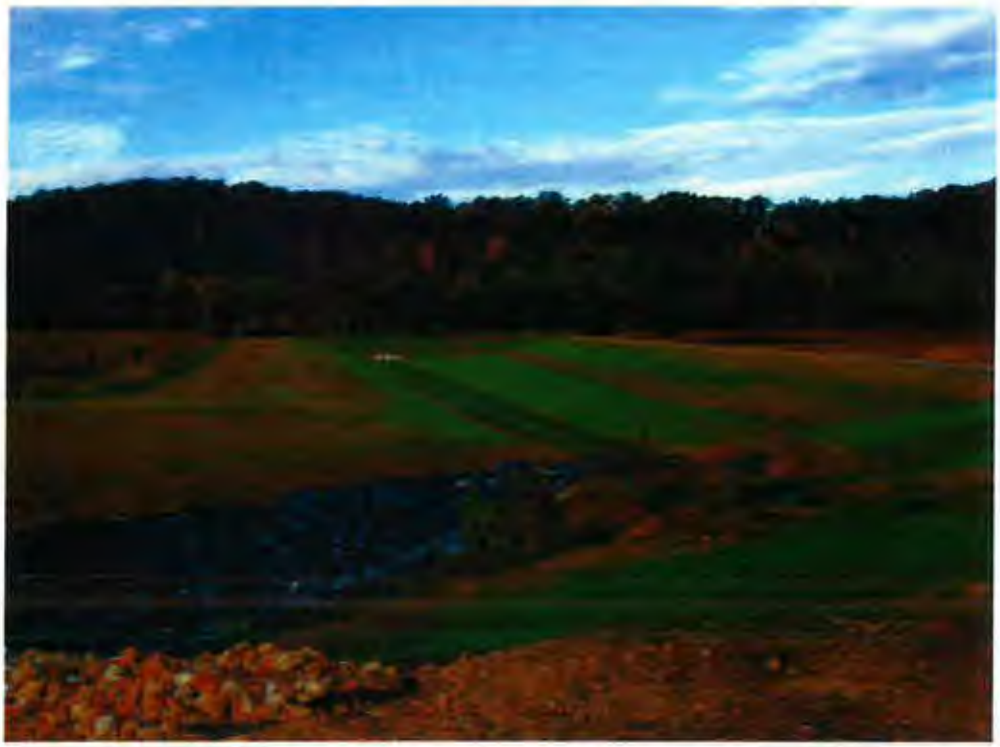
Former Plant Area facing south (TCRA Buildings, NTCRA Buildings, OU-10 Plant Area Soils). Over 70 acres of multi-story manufacturing buildings formerly occupied this area prior.

Sulfate Basin 5 facing south (NTCRA Basins). This area was clean closed and converted into a wetland and pond area.

Basin Area (NTCRA Basins) - warm season grasses facing south.

Sulfate Basins 2 and 3 facing north (NTCRA Basins) – warm season grasses. The OU-7 Groundwater Leachate Treatment Plant is in the upper right background.

Sulfate Basin 1 (NTCRA Basins) – Cell 4 facing southwest. Sulfate Basin 1 – Cell 3 is in the background.



Emergency Lagoon (NTCRA Basins) facing west toward the river.

OU-10 Viscose Basins 2 & 3 (foreground), OU-10 New Landfill (brown hill), and OU-7 Groundwater Leachate Treatment Plant in background. Facing south.

OU-10 Former WWTP Area and Polishing Basins (left) prior to seeding in Spring 2014. VBs 4-6 (OU-10) are in right background. Facing north.

OU-7 Groundwater Leachate Treatment Plant facing northwest. The location of the former Fly Ash Stockpile (NTCRA Basins) is in the foreground.